Dell PowerEdge Systems Running Red Hat Enterprise Linux 7

Release Notes

Notes, Cautions, and Warnings

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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Overview

Red Hat Enterprise Linux 7 is available on the following architectures:

- 64-bit AMD
- 64-bit Intel

System configuration requirements

For detailed system configuration requirements of this version of Red Hat Enterprise Linux, see the documentation at **redhat.com/support**.

Memory

The following table lists the system memory requirements for the x86_64 architecture of Red Hat Enterprise Linux 7.

Table 1. Memory Requirements for x86_64 Architecture

Memory	Size
Minimum recommended system memory	1 GB per logical CPU
Maximum certified system memory	6 TB

Installation and upgrade instructions

For information on installing or upgrading from a previous version of Red Hat Enterprise Linux 7, see *Installation Instructions and Important Information* at **dell.com/operatingsystemmanuals.**

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Issues and Resolutions

Unable to restart Red Hat Enterprise Linux 7 after the successful installation on iSCSI LUN

Description:	Unable to restart Red Hat Enterprise Linux 7 after the successful installation on iSCSI LUN, when the iSCSI adapter network settings are set to Static IP.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	During the restart, the system does not recognize the target static IP.
Workaround:	Restart the system by using iSCSI with client IP address to `/boot/grub2/grub.cfg`.

Red Hat Enterprise Linux 7 might not boot in the UEFI mode

Description:	After booting Red Hat Enterprise Linux 7 from the hard drive in the UEFI mode, if you enter `C` to go to the grub command line, and then enter `exit`, the system automatically restarts and displays the Red Screen of Death (RSOD).
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	Grub2 bootloader exits before the system services complete running.
Workaround:	Press Esc to exit from grub command line.

Installing Red Hat Enterprise Linux 7 by using the iDRAC Virtual Media does not resume if the iDRAC network is set to the shared LOM mode

Description:	When installing Red Hat Enterprise Linux 7 by using the iDRAC Virtual Media, where the iDRAC network is set to **Shared LOM** mode, Red Hat Enterprise Linux 7 installer initiates a reset on the LAN on Motherboard (LOM) devices.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	If **Spanning Tree** is enabled on the switch, there could be a delay in the switch port forwarding network traffic. This delay results in loss of connection to iDRAC or Virtual Media and the installation stops. After sometime the connectivity is restored but the installer but the installation does not resume.This is an expected behavior from the installer.

Workaround:	Disable **Spanning Tree Protocol** (STP) or set **PortFast** on the uplink port to the iDRAC, during the Virtual Media installation.

Unable to shutdown the Red Hat Enterprise Linux 7 when you select the Graceful shutdown option or when you press the power button on the system

Description:	When you select the **Graceful shutdown** option from iDRAC or press the power button, the system goes to a suspended state and all the tasks stop. The system restarts to the login prompt on pressing any key.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	By default the **Power button action** drop-down menu is mapped to the **Suspended** state in the gnome-tweak-tool.
Workaround:	Select **Shutdown** from the **Power button action** drop-down menu.

Kernel panic occurs when OMSA services are started on Red Hat Enterprise Linux 7

Description:	Kernel panic occurs when OpenManage Server Administrator (OMSA) services are started on Red Hat Enterprise Linux 7.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	The Kernel might spend more time in servicing the kernel timer functions and set a flag to prevent the other code from resetting the timer hardware (APIC timer). Then it programs the timer hardware for a timeout up to 100 ms to run the kernel timer functions. At the next timer hardware interrupt, this flag is cleared. However, there is a bug in the kernel where this flag can be ignored in one specific code path. When this happens, the timer hardware can be set to the wrong timeout value. This incorrect timeout value can be over 10 seconds during this time no kernel timer functions will be run.
Workaround:	Update the kernel to Z-stream kernel.

When Virtual Disk (VD) is not initialized, Red Hat Enterprise Linux 7 cannot be installed on 4k sector hard drives

Description:	While installing Red Hat Enterprise Linux 7, on RAID 0 volume created on 4K sector hard drive, it displays the message **setting up the installation environment** and an unknown error.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	Calculating the time required to delete the GUID partition table (GPT) magic number is incorrect for 4k sector hard drives.

Workaround:	Initialize VD and install the Red Hat Enterprise Linux 7.

Invalid naming conventions for the ports of Emulex OneConnect OCe14102-UX-D card when NPAR-EP is enabled

Description:	Red Hat Enterprise Linux 7.0 with Emulex OneConnect OCe14102-UX-D card naming conventions by biosdevname may not be accurate for all the networking devices. As a result partitions 3 and 4 of all the four ports of Emulex is not named as expected.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	Biosdevname has the Limitation, which cannot handle more than 7 PCI functions.
Workaround:	Add kernel boot parameter "biosdevname=0" this return back to ethN naming.

Unable to move soft link .desktop file

Description:	Unable to move soft link .desktop file with `type=link`.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	Unable to deference the source of softlink.
Workaround:	Use soft link as hard link.

Unable to boot Red Hat Enterprise Linux 7, when the Execute Disable option is disabled

Description:	Unable to boot Red Hat Enterprise Linux 7 in the UEFI mode, when the **Execute Disable** option is disabled in the BIOS mode.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	The pagelookup table is marked with NX flag so during the page execution the page fault occurs.
Workaround:	Do not disable the **Execute Disable** option in BIOS or use default BIOS settings.

Unable to install Red Hat Enterprise Linux 7 in the UEFI mode

Description:	During the installation of Red Hat Enterprise Linux 7, the Anaconda installer is unable to create boot entry using `EFIbootmgr`, in the UEFI mode.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	`EFIbootmgr` is unable to create a UEFI boot entry, when boot variables of Hard drive C: (under BIOS) is greater than 1024 bytes. This is a known limitation.

Workaround:

1. Remove all the bootable devices shown under `Hard Drive C:` (listed in BIOS under F11 option).
2. Boot into legacy BIOS, and change the boot setting to UEFI mode.
3. Reboot the server, re insert the devices that we removed under `Hard Drive C:` and reinstall.

While adding second slave to bond, it asks for connection type and shows additional connection types

Description: To create the bonding interference between the master and the slave, slave asks for connection type and displays additional connection types.

Applies to: Red Hat Enterprise Linux 7.0

Cause: Network manager does not filter the type of connection required for the slave.

Workaround: This error can be ignored as there is no functionality loss.

Loopback device is displayed as unknown in network settings

Description: Network setting of local host displayed as unknown for loopback interface.

Applies to: Red Hat Enterprise Linux 7.0

Cause: Network manager does not manage the loopback interface.

Workaround: This error can be ignored as there is no functionality loss.

Kernel panic on reboot or shutdown when Mellanox Team is setup

Description: Rebooting the system results in kernel panic, when the system has a bonding device with Mellanox ConnectX-3 devices as slaves.

Applies to: Red Hat Enterprise Linux 7.0

Cause: Kernel panic occurs when Mlx4_ib driver accesses the slave data structure that is already freed during the restart.

Workaround: Ensure that Mlx4_ib driver is unloaded before reboot.

PCIeSSDs reports incorrect pciehp messages during boot

Description: During Red Hat Enterprise Linux 7 bootup, pciehp related messages are displayed even when there are no hotplug activity: "**pciehp 0000:82:05.0:pcie24: Device 0000:84:00.0 already exists at"**

Applies to:	Red Hat Enterprise Linux 7.0
Cause:	While booting kernel attempts to add a pre-existing device prior moving to the suspend state.
Workaround:	This error can be ignored as there is no functionality loss.

VMM does not displays Windows Server 2012 in drop-down list

Description:	Virtual Machine Manager (VMM) does not display Windows Server 2012 in the drop-down list of a new Virtual Machine window.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	There is no entry created for Windows Server 2012 in the VMM.
Workaround:	There is no functionality loss. You can install Windows Server 2012 after selecting any generic windows item from the drop-down list.

Ethtool link test fails in Offline mode despite the cable being connected to the port

Description:	Ethtool link test fails in Offline mode despite the cable being connected to the port.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	A PHY link require five seconds to enable the link.
Workaround:	There is no functionality loss.

PXE boot fails with a system crash when Red Hat Enterprise Linux 7 is installed on local storage and the tftp server has an invalid boot EFI file

Description:	When Red Hat Enterprise Linux 7.0 is installed on local storage and we try to boot through **PXE** in **UEFI** mode, where the PXE setup has an invalid boot **EFI** file in **tftp** server, it is expected to boot from Red Hat Enterprise Linux 7.0 on local storage, however it fails with Red Screen of Death (RSOD).
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	1. **shim** must load the grub from where the shim is loaded, currently there is no check for this. 2. RSOD occurs since there is no check against the pointer in the unhook system services, which is responsible for loading the image.
Workaround:	Ensure that the valid boot **EFI** file is configured in the **tftp** server.

NVMe driver reports I/O error on Surprise Removal or Surprise Insertion

Description:	NVMe driver reports multiple buffer I/O errors on surprise removal and surprise insertion of a NVMe device and the following error message is displayed `Buffer I/O error on device nvme0n1, logical block 0`.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	Surprise Removal Surprise Insertion (SRSI) feature is not supported.
Workaround:	This error can be ignored as there is no functionality loss.

Reading EEPROM from a Broadcom device via ethtool results in soft lockup

Description:	With Broadcom network adapters, reading EEPROM via `ethtool -e`**<interface name>** results in CPU soft lock, when cable is not connected to the port.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	When cable is not connected, the clock speed of the device becomes slow, based on the power saving mode setting defined in NVRAM. Due to this, EEPROM reads take a long time to complete and results in CPU soft lockup.
Workaround:	Ensure that cable is connected to the specific port before reading EEPROM on that port.

Error during the first boot on iSCSI disk

Description:	When Red Hat Enterprise Linux 7.0 is installed on iSCSI disk from Broadcom 10G network adapter, **dmesg** shows the following error message: • `Failed to empty BRB.` • `Storm stats were not updated for three times.` • `Driver assert.` • `Begin crash/panic dump.`
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	BRB is not cleared by the **bnx2x** driver during the iSCSI boot that was previously used by the **UNDI** driver.
Workaround:	Reboot the system.

Enabling SR-IOV virtual functions on both Intel and Mellanox cards result in invalid naming conventions for the network devices

Description:	While rebooting, the naming conventions by **biosdevname** may not be accurate for all the networking devices, when SR-IOV virtual functions are enabled by **systemd** on both Intel and Mellanox devices at the same time.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	The mlx4_core driver consumes more time for the probe of all the VFs, which results in termination of **biosdevname**.
Workaround:	Enable SR-IOV on Intel using the **sysfs** method.

Mellanox card does not display supported link modes as 40G

Description:	The Mellanox 40G Network card does not display the supported link modes as 40G. Instead, it is displayed as 10G.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	The Mellanox driver does not set the 40 GB bits in advertised and supported links.
Workaround:	This error can be ignored as there is no functionality loss.

Unable to install Red Hat Enterprise Linux 7 on a drive with an existing btrfs partition

Description:	During Red Hat Enterprise Linux 7 installation after selecting a drive with existing `btrfs` file system, the Anaconda installer is not able to delete the `btrfs` partitions.
Applies to:	Red Hat Enterprise Linux 7.0
Cause:	The Anaconda installer is not able to delete the sub volumes of `btrfs` file systems.
Workaround:	Ensure that there are no existing `brtfs` partitions on the drive.

syslog displays error Related to network.service

Description: `syslog` displays the following error messages indicating that network.service has failed:

- `Failed to activate 'em1': Connection 'em1' is not available on the device em1 at this time.`
- `Connection activation failed: Connection 'em1' is not available on the device em1 at this time.`

- `Failed to start LSB: Bring up/down networking.`
- `Unit network.service entered failed state.`

Applies to: Red Hat Enterprise Linux 7.0

Cause: In the network.service script, `nmcli` cannot get the network interface state information for the first time. The retry is successful.

Workaround: This error can be ignored as there is no functionality loss.

Unable to move the OpenManage Server Administrator icon anywhere on the desktop

Description: You are unable to move the OpenManage Server Administrator icon anywhere on the desktop. `Error while copying` message is displayed.

Applies to: Red Hat Enterprise Linux 7.0

Cause: Hard linked `.desktop` files do not have source files information populated appropriately.

Workaround: This error can be ignored as there is no functionality loss.

ras-mc-ctl command displays DIMM labels related error message

Description: When you run the command **ras-mc-ctl --print-labels**, the system displays the error `No dimm labels for Dell Inc`.

Applies to: Red Hat Enterprise Linux 7.0

Cause: `rasdaemon` is unable to get the **DIMMs** details from the SQLite datebase. Also, `rasdaemo` cannot guess the DIMMs label using the `dmidecode` for the new memory controllers.

Workaround: This error can be ignored as there is no functionality loss.

3

Getting Help

Contacting Dell

NOTE: Dell provides several online and telephone-based support and service options. If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog. Availability varies by country and product, and some services may not be available in your area.

To contact Dell for sales, technical support, or customer-service issues:

1. Go to **dell.com/contactdell**.
2. Select your country from the drop-down menu on the top left corner of the page.
3. For customized support:
   a. Enter your system service tag in the **Enter your Service Tag** field.
   b. Click **Submit**.
      The support page that lists the various support categories is displayed.
4. For general support:
   a. Select your product category.
   b. Select your product segment.
   c. Select your product.
      The support page that lists the various support categories is displayed.

Related documentation

NOTE: For all PowerEdge and PowerVault documentation, go to **dell.com/poweredgemanuals** and **dell.com/powervaultmanuals**. Enter the system Service Tag to get your system documentation.

NOTE: For information on deploying Red Hat Enterprise Virtualization, see the product documentation available at **docs.redhat.com**.

You product documentation from Dell includes:

- Installation Guide
- Release Notes

Documentation Feedback

If you have feedback for this document, write to **documentation_feedback@dell.com**. Alternatively, you can click on the Feedback link in any of the Dell documentation pages, fill out the form, and click Submit to send your feedback.